

# Government of India Department of Atomic Energy Indira Gandhi Centre for Atomic Research Metallurgy and Materials Group Kalpakkam – 603 102

#### **NOTICE INVITING e-TENDER**

#### TENDER NOTICE No.: IGC/MMG/MCG/PMD/T-0003/2023

#### I. Guidelines for e-Tendering in CPPP website:

1. To participate in the tendering process on the CPP Portal, Prospective Bidders require a valid Class III Digital Signature Certificates. All the documents related to the eligibility criteria of tender should be submitted electronically through CPP portal only. The instructions given in Annexure-1 are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a>.

#### II. NIT Details:

2. Online item rate tender in Two parts i.e. Part-I – Techno-commercial Bid and Part-II – Financial Bid are hereby invited through e-Tendering mode on behalf of the President of India by **Superindenting Engineer, MMG, IGCAR, Kalpakkam - 603 102**, Chengalpattu District for the following work from experienced Contractors who have satisfactorily completed similar works of such magnitude.

i) NIT No.	IGC/MMG/MCG/PMD/T-0003/2023
ii) Name of work	Fabrication of SS 316L porous micro filters
iii) Estimated Cost put to tender	Rs. 26,97,480 Lakhs (incl. 18% GST)
iv) Completion period	12 [Twelve] Months from the date of release of WO
v) Earnest Money Deposit	Rs.53,950/- (Rs. Fifty three thousand nine hundred and fifty only) (2% of tendered value) (In Words) to be submitted in the form of Deposit at Call Receipt or Demand Draft / Bankers Cheque / Pay Order or Fixed Deposit Receipt drawn in favour of Pay and Accounts Officer, IGCAR, Kalpakkam payable at Kalpakkam
	Cash, Cheque, bank guarantee for Earnest Money deposit will not be accepted.

vi) Cost of tender document	NIL
vii) Tender processing fee	NIL
viii) Security Deposit	2.5 % of tendered value
ix) Performance Guarantee	3 % of tendered value
x) Publishing date of tender	14.03.2024 (10:00hrs.)
xi) Documents download/Sale Start date and Time	14.03.2024 (10:00 Hours)  To Download – please visit CPPP website on: https://eprocure.gov.in/eprocure/app  Detailed NIT is also available on website www.igcar.gov.in for view only.
xii) Seek Clarification Start Date and Time	14.03.2024 (10:00 Hours)  The bidders are requested to send their clarification/ queries on CPPP website <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a> or queries may be sent to e-mail id — <a href="mailto:sharibabu@jgcar.gov.in">sharibabu@jgcar.gov.in</a> and <a href="mailto:sudha@jgcar.gov.in">sudha@jgcar.gov.in</a>
xiii) Seek Clarification End Date and Time	20.03.2024 (15:00 Hours)
xiv) Bid Submission Start Date and Time	21.03.2024 (10:00 Hours)
xv) Bid Submission and Sale Closing Date	12.04.2024 (10:00 Hours)
xvi)Last date and time for submission of Original EMD	On or before 19.04.2024 (15:00 Hours) at  The Office of Superintending Engineer (E), MMG, Kalpakkam – 603 102, Chengalpattu District. (Contact Phone No. 044-27480500 Extn: 22134). The tenderer shall be required to submit the Earnest Money in a sealed envelope marked 'Earnest Money.'  Please note that, EMD shall be submitted in a sealed envelope clearly mentioning the Unit name (IGCAR), Tender number & Name of work in a cover without fail. However, documents sent by postor courier will also be considered provided the same is received within due date & time.  If the tenderer fails to submit original DD/BC/PO/DR etc., within the prescribed period as mentioned above

xvii) Date and Time of online opening of Part-I (Technical Bid)	24.04.2024(15:30 Hours) at the office of Superintending Engineer (E), MMG Kalpakkam
xviii) Period of verification of credentials for evaluation.	25.04.2024 to 08.05.2024 [Except on 27.04.2024, 28.04.2024,04.05.2024 & 05.05.2024]  Note: Original documents substantiating the eligibility criteria all mentioned should be produced for verification during the above period. For outstation bidders who have difficulty in appearing in person original notary certified documents can be submitted by registered post. If the tenderers fail to submit original credential for verification, within the prescribed period as mentioned above those tenders will be summarily rejected.
xix)Evaluation of Part-I (Technical bid)	Part-I evaluation will be done based on credentials submitted by the bidders for opening Part-II (Financial Bid). Inspection of eligible works will be carried out by Technical Evaluation Committee, if necessary.
xx) Date of opening of Financial Bids of qualified bidders	Date and time will be notified later
xxi) Minimum Bid/Offer validity period required	120 Days from bid submission closing date

**Note:** Corrigendum/ Addendum/ Amendments if any shall be hosted on IGCAR/CPPP websites only. Bidders are requested to visit the website regularly.

#### III. <u>Eligibility Criteria:</u>

3. The bidders who fulfill the following criteria shall be considered for participation.

#### 3.1. **JOINT VENTURES ARE NOT ACCEPTED.**

3.2. Experience of having successfully completed works during the last seven years ending previous day of last date of submission of tender as follows:

Three similar completed works each costing not less than the amount equal to 40 % of the estimated cost put to tender,

[or]

Two similar completed works each costing not less than the amount equal to 60 % of the estimated cost put to tender,

[or]

One similar completed work of costing not less than the amount equal to 80 % of the Estimated cost under a single contract.

"Similar work" shall mean that "Fabrication of porous metallic filters"

Note:

- i. Eligible similar nature of works should have been executed in India only.
- ii. Works got executed on back to back basis through another contractor will not be treated as eligible works.
- iii. In case of the similar work done under private sector, the completion certificate shall be supported with the copies of TDS certificate along with Form 26AS
- iv. The value of completed works shall be brought to current costing level by enhancing the actual value of work at **simple rate of 7% per annum**, calculated from the date of completion to previous day of last date of submission of tender.
- 3.3. Should have an average annual financial turnover for works/goods/services of at least **50% of the estimated cost** during the immediate last three consecutive financial years (FY ending 31/03/2023). Scanned copy of certificate duly audited by Registered Chartered Accountant to be <u>uploaded</u>.
- 3.4. Should not have incurred any loss (Profit after tax should be positive) in more than two years during the available last five consecutive financial years (FY ending 31/03/2023). Details shall be furnished as per Proforma as specified in Form A, duly supported by figures in balance sheet/profit and loss account for the last Five (5) years duly audited by Registered Charted Accountant as submitted by the applicant to Income tax department.
- 3.5. Should have a Solvency of minimum **40%** of estimated cost obtained from competent authorities as per Proforma specified in Form B. Scanned copy of solvency certificate shall be uploaded. The Solvency certificate should be valid on the last date of tender submission or the solvency certificate shall not be older than one year from the last date of tender submission.
- 3.6. The bidding capacity of the contractor should be equal to or more than the estimated cost of the work put to tender. The bidding capacity shall be worked out by the following formula:

#### Bidding Capacity = [A x N x 1.5] - B

#### Where,

- A = Maximum turnover on works/goods/services executed in any one year during the last seven years taking into account the completed as well as orders in progress. The value of completed orders shall be brought to current costing level by enhancing at a simple rate of 7% per annum.
- N = Number of years prescribed for completion of work for which bids has been invited.
- B = Value of existing commitments and ongoing orders to be completed during the period of completion of work for which bids have been invited.
- 3.7 The bidder must possess the machinery/equipment listed in Form H which are necessary to carry out the fabrication work in-house .The bidder shall give an undertaking that he has the required machinery/equipment for manufacturing the filter in-house and will not be subcontracting filter fabrication work. If necessary ,EIC or his representative may carry out factory evaluation to assess the firm's capability to execute the work in-house.

- 4. The bidder shall fill the details in attached excel sheets (Forms) as detailed below and supporting documents should be scanned from originals and uploaded within the period of bid submission by the bidder: -
- 4.1. Financial Turnover as specified in Form-A along with balance sheet and Form-26AS.
- 4.2. Similar class of work completed as specified in Form C during last seven years ending previous day of last date of submission.
- 4.3. List of works/projects under execution or awarded as specified in Form D.
- 4.4. Details regarding structure and organization of the firm as per Proforma specified in Form F.
- 4.5. Details regarding manpower possessed shall be furnished as per Proforma specified in Form G. The details of trained and certified workmen proposed to be employed at the work site of the project should also be furnished.
- 4.6. Details of tools, machineries and equipment likely to be used / possessed for carrying out the work shall be furnished as per Proforma specified in Form H.
- 5. The bidder shall upload/submit the following documents and these documents should be scanned from originals and uploaded within the period of bid submission by the bidder
- 5.1. **GSTIN**
- 5.2. PAN
- 5.3. Solvency certificate as per Proforma specified in Form B.
- 5.4. Performance certificate of works referred to in Forms 'C' as per Proforma specified in Form E.
- 5.5. Form of Agreement
- 5.6. Registration with EPFO and ESIC
- 5.7. Annexure 2: Tender Acceptance Letter (Scanned copy to be uploaded and originals shall be submitted during the period of verification of credentials)
- 5.8. Annexure 3: Undertaking by Contractor (Scanned copy to be uploaded and originals shall be submitted during the period of verification of credentials).
- 5.9. Annexure 4: Declaration by Contractor (Scanned copy to be uploaded and originals shall be submitted during the period of verification of credentials).
- 6. Even though a bidder may satisfy the above requirements, the bidder would be liable to disqualification/ debarment if the bidder has: -
- 6.1. Made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the eligibility criteria document.
- 6.2. Any effort on the part of the bidder or his agent to exercise influence or to pressurize the employer. Canvassing of any kind is prohibited.
- 6.3. Record of poor performance such as abandoning work, not properly completing the contract, or financial failures / weaknesses, etc.,
- 6.4. Failed to produce originals of documents required for evaluation/qualification of the bidder. The Originals of the above Certificates shall be produced as and when called for.

- Irregularities if any observed will lead to rejection of the offer irrespective of the stage at which it is observed. Such bidders will be debarred for bidding in IGCAR as per applicable rule.
- 6.5. Breached the code of integrity. Firms will be debarred for a period of two years if it is determined that the bidder has breached the code of integrity as per Rule 175 and Rule 151 of GFR 2017.
- 6.6. Supply of sub-standard material, non-supply of material, abandonment of works, substandard quality of works, etc. Firms will be debarred for a period of two years for any actions or omissions by the bidder for other than violation of code of integrity, for the reason like supply of sub-standard material, non-supply of material, abandonment of works, sub-standard quality of works, etc.

#### IV. Information and conditions:

- 7. Information and instructions for tenderer posted on website shall form part of tender document for e-tendering mode.
- 8. Tender document is prepared in two parts viz. Part-I (Techno-commercial Bid) and Part-II (Financial Bid). The tender document consisting of plans, specifications, schedule of quantities of various types of items to be executed and set of terms and conditions of the contract to be complied with and other necessary documents. All the documents will form part of agreement after award of work to successful bidder.
- 9. The department reserves the right to accept/ reject any prospective application without assigning any reason thereof.
- 10. Tenderer to note that tenders with any condition including that of conditional rebate shall be rejected forthwith. However, tenders with unconditional rebate will be accepted.
- 11. Tenders will be received online up to time & date as mentioned in the NIT details above. Part-I will be opened on the time & date as mentioned in the NIT details above. The receipt of EMD will be checked first. If found in order, Part-I will be opened.
- 12. No modifications in the tender shall be allowed after opening Part –I (Technocommercial Bid).
- 13. After opening of Part-I (Techno-commercial Bid) of tender, the online credentials submitted by the bidder will be verified with respect to their eligibility for the work and if required, visit to selected worksites of on-going/completed works of the bidders will be made to evaluate the capability of the bidders based on financial eligibility criteria, technical eligibility criteria, organizational structure of the bidder, etc., as stipulated in tender. Short listing of bidders shall be subject to thorough verification of bidder's credentials and inspection, if any, carried out. The Part-II (Financial Bid) of the qualified tenderers shall then be opened at notified date and time. Date of opening of Part-II will be intimated to all bidders through the CPP Portal website.

Note: During technical evaluation, missing documents if any, can be asked for submission.

14. The EMDs of the unsuccessful bidders will be returned without any interest only after the award of contract.

- 15. If any information furnished by the applicant is found to be incorrect at a later stage, they shall be liable to be debarred from tendering/ taking up works in IGCAR as per applicable rule. The department reserves the right to verify the particulars furnished by the applicant independently.
- 16. Tender will be kept valid for **120 (One Hundred and Twenty)** days from the last date of closing of online submission of tender.
- 17. If any tenderer withdraws his tender within the validity period and before award of work whichever is earlier or make any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall without prejudice to any right or remedy, be at liberty to forfeit 50 % (Fifty Percent) of the Earnest Money absolutely. Further, the tenderer shall not be allowed to participate in the re-tendering process of the work.
- 18. The tentative makes have been specified in the tender document based on requirements & desired performance and detailed study of the technical parameters, manufacturing process, quality assurance/control & testing. The list is merely for guidance and bidders can prefer any other make which is meeting technical specifications given under Section- V, Schedule of Quantities given under Section-VIII of Tender document, shall confirm to the relevant BIS codes and other relevant codes. In case of non-approved make(s), the bidder(s) shall suggest such equivalent / alternate make / brand, meeting above-mentioned technical parameters, during pre-bid stage and before technical bid submission.
- 19. The Financial Proposal/Commercial bid / BoQ format is provided as BoQ\_XXXX.xls along with this tender document at <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a>. Bidders are advised to download this BoQ\_XXXX.xls as it is and quote their offer/rates in the permitted column and upload the same in the commercial bid. All tendered rates shall be inclusive of all taxes and levies payable under respective statute. Bidder shall not tamper/modify downloaded Financial Bid template in any manner. In case if the same is found to be tampered/modified in any manner, tender will be completely rejected and appropriate action will be taken by department. If it is desired to submit revised financial bid then, it shall be mandatory for the bidder to submit revised financial bid. If not submitted then, the bid submitted earlier shall become invalid.
- 20. Contractor must ensure to quote rate of each item. The column meant for quoting rate in figures appears in SKY BLUE colour. While selecting any of the cells a warning appears to mandatorily fill all such cells with any value, including "0" (ZERO) and if the bidder has quoted zero, then the rate of such item shall be treated as zero.
- 21. In case of successful tenderer, the tenderer is required to deposit an amount equal to 3% of the tendered and accepted value of the contract as irrevocable performance guarantee within a period of 15 days from the date of issue of Letter of Intent//Letter of Acceptance, in one of the following forms i.e. Deposit at Call Receipt/Bankers Cheque /Demand Draft or Fixed Deposit Receipt (FDR) of a scheduled Bank or an irrevocable bank guarantee bond of any scheduled bank in the prescribed form given in Annexure drawn in favour of Pay & Accounts Officer, IGCAR, Kalpakkam. Earnest Money deposited along with bid will be returned after receiving Performance Guarantee.
- 22. The letter of award of work will be issued only after the above said performance guarantee in any one of the prescribed form is received and accepted, failing which the

Government shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money absolutely.

- 23. In addition to the above, the successful tenderer is required to remit security deposit amounting to 2.5 % [Two and half Percent] of the tendered and accepted value which shall be deducted at 2.5 % [Two and half Percent] of the gross amount of the bill from each running/final bill.
- 24. Bidder should have valid ESI & EPF registration and furnish the certificate of registration with EPFO and ESIC, for bidder's eligibility and qualification. The employer's contribution as per extant government orders shall be paid by the contractor which shall be reimbursed on production of documentary evidence. Hence the quoted rate shall not be inclusive of ESI & EPF employers contribution.
- 25. Bidders who do not have valid GST certificate as on the last date of online submission of the bid, are not eligible for this tender. Bidders shall submit an undertaking in the format provided in this document. Any subsequent defaulting in payment of GST by the bidder, will also be scrutinized by the department, and may lead to rejection of the bid/cancellation of contract.
- 26. The rates quoted by the tenderer in the schedule shall be inclusive of Goods and Service Tax (GST) @18% or any other Tax applicable. GST or any other tax applicable as per extant orders in respect of this contract shall be payable by the Contractor and Government will not entertain any claim whatsoever in respect of the same.
- 27. Labour Welfare CESS (wherever applicable), Income Tax and TDS on GST as applicable from time to time, shall be deducted from each bill and deducted value will be remitted to the concerned tax authorities. Any other taxes /cess as per Government directives from time to time, shall be deducted from each bill paid to the contractor.
- 28. Bidders shall not be under a declaration of ineligibility for tender quoting and fraudulent practice.
- 29. Documentary evidence of adequate financial standing shall be furnished.
- 30. Information regarding projects in hand, current litigation, orders regarding exclusion, expulsion or block entry if any to be furnished.
- 31. The capacity of the contractor to take up a new project under consideration in addition to his present commitments must be clearly brought out. He should also furnish the details referring as to have both physically and financially capable of executing this contract in the stipulated time as per milestones projected in addition to executing the other commitments. Evidence of adequacy of working capital for this contract, access to lines of credit and availability of other financial resources shall be furnished.
- 32. Copies of original documents detailing the constitution or legal status, place of regulation and principal place of business, written power of attorney of the regulatory of the bond to commit the bidders shall be submitted.
- 33. Tenderer may please intimate their Bank Account Number, IFSC code, Branch details so as to enable the department for payments through Bank.

- 34. Qualification and experience of key site management and technical personnel proposed for the contract shall be intimated.
- 35. Information regarding any litigation, current or during the last seven years, in which the bidder is involved, the parties concerned and disbursed amount, shall be submitted .
- 36. Proposals for sub-contracting components of the works including the qualification and experience of the identified sub-contractor in the relevant field shall be submitted.
- 37. The proposed methodology and program of execution, backed with equipment planning and deployment duly supported with broad calculation and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion as per milestones shall be furnished.
- 38. The contractor shall be responsible for the strict observance and implementation of all the safety precautions & procedures and house-keeping practices. The contractor shall comply with all the instructions given by the Engineer from time to time on these aspects in this regard.
- 39. The contractor shall comply with provisions of Contract labour act -1970, Workmen's compensation act 1923, Minimum wages Act 1948, EPF Act, Gratuity Act and other labour laws as applicable.

The contractor should intimate the maximum number of workmen//manpower/staff employed / likely to be employed by him to the Engineer in Charge, before commencement of the work. In case the Contract labour act does not apply to the firm, it shall be intimated the Engineer in Charge before commencing the work. All the workers are to be paid applicable minimum wages and payment is to be made through Bank transfer.

The contractor shall take workmen compensation policy for all workers employed by him, at site, for the subject work after the award of contract.

EPF, ESI and workmen's compensation policy contributions for all the workers on the part of employer in respect of this contract as applicable shall be paid by the contractor which shall be reimbursed on production of documentary evidence.

Records with respect to wages, PF, insurance, etc. of the workers shall be maintained & produced on demand for verification. In case of non-coverage by ESIC, the same to be informed to Engineer-in-Charge before commencing the work. In case of any failure to comply with these above provisions, Department shall be entitled to recover the same from the bills.

40. Eligible source countries: Any Bidder, from a country which shares a land border with India must comply to the Order (Public Procurement No.1) & Order (Public Procurement No. 2) issued by Public Procurement Division, Department of Expenditure, ministry of Finance, Government of India vide F. No. 6/18/2019-PPD dated 23.07.2020 and its addendum from time to time. Also, the bidder shall provide a undertaking as per Para – 8 of Annexure - 3. If such declaration or certificate is found to be false or to be incorrect at any time of submission of Bid or after awarding the Contract then, the said Contract will be terminated, along with such other actions as may be permissible under the relevant law of India.

Superindenting Engineer, Group Name, IGCAR, on behalf of President of India does not bind himself to accept the lowest or any other tender and reserves to himself the authority to reject any or all of the tenders or to allot PARTs of the works to different agencies without assigning

any reasons there for. All tenders, in which any of the tender conditions is not fulfilled, shall be summarily rejected.

Superindenting Engineer, MMG, IGCAR For and on behalf of the President of India

#### ANNEXURE - 1

#### **GUIDELINES FOR E-TENDERING IN CPPP WEBSITE**

The instructions given in the annexure are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. As the instructions may change on CPP portal, the bidder shall follow the instructions given on the portal (https://eprocure.gov.in/eprocure/app) at the time of bidding.

#### 1. Registration

- 1.1. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL:https://eprocure.gov.in/eprocure/app) by clicking on the link "Online Bidder Enrolment" on the CPP Portal which Is free of charge.
- 1.2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts. Bidders who have already registered and have valid user ID and password from https://eprocure.gov.in, need not to obtain fresh user ID and password for the purpose of participation in the present tender.
- 1.3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 1.4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra, etc.), with their profile.
- 1.5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 1.6. Bidder then logs into the site through the secured log-in by entering their user ID / password and the password of the DSC /e-Token.

#### 2. Searching for Tender Documents

- 2.1. The NIT & tender document consisting of specifications, drawings, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website <a href="https://eprocure.gov.in/eprocure/app.">https://eprocure.gov.in/eprocure/app.</a> (NIT can also be viewed from <a href="https://eprocure.gov.in/eprocure/app.">www.igcar.gov.in/eprocure/app.</a>
- 2.2. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords, etc., to search for a tender published on the CPP Portal.
- 2.3. Once the bidders have selected the tenders they are interested in, they may download the required documents/tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate

the bidders through SMS/e- mail in case, there is any corrigendum issued to the tender document.

2.4. The bidder should make a note of the unique Tender ID assigned to each tender, in case, they want to obtain any clarification / help from the Help desk.

#### 3. **Preparation of Bids**

- 3.1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 3.2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid. The tender shall be summarily rejected if any Financial Bid information is disclosed along with EMD or Technical Bid (Part-I).
- 3.3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 3.4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

<u>Note:</u> My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

#### 4. Submission of Bids

- 4.1. Bids shall be submitted online only at CPPP website : <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a>
- 4.2. Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 4.3. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 4.4. Bidder has to select the payment option as "offline" to pay the EMD as applicable and enter details of the instrument.
- 4.5. Bidder should prepare the EMD as per the instructions specified in the tender document as applicable. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the

- tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 4.6. The agency shall download the pre bid clarification if any for the work and upload the same (scanned copy) duly signed and sealed. The revised documents (if any) shall be uploaded in e tender portal.
- 4.7. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the Financial Bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the SKY BLUE coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 4.8. Tenderers are advised to upload their documents well in advance, to avoid last minute rush on the server or complications in uploading. IGCAR, in any case, shall not be held responsible for any type of difficulties during uploading the documents including server and technical problems whatsoever.
- 4.9. The server time (which is displayed on the bidders 'dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 4.10. Submission of the tender documents after the due date and time (including extended period) shall not be permitted.
- 4.11. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 4.12. Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 4.13. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.
- 4.14. Intending Bidders are advised to visit this website regularly till closing date of submission to keep themselves updated as any change/ modification in the tender will be intimated through this website only by corrigendum / addendum/ amendment.

- 4.15. After submission of the bid, the bidder can re-submit revised bid any number of times before last date and time of submission of bid/document as notified.
- 4.16. In the case of bids in two / three stage system, if it is required to submit revised financial bid then it will be mandatory to submit revised financial bid. If not submitted then the bid submitted earlier will become invalid.

#### 5. Assistance to Bidders

- 5.1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 5.2. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.
- 5.3. All bidders who have locked in (Not Guest Login) with their respective credentials in NIC & have downloaded tenders, must clicked on **FAVOURITE button**, so that the tender will move into their **FAVOURITE ZONE**, to get the uploaded corrigendum intimation from website.
- 5.4. Contact for assistance for registration and participation in e-Tendering:
  - i. 24x7 CPP Portal Helpdesk -(0120)4001 002, (0120)4001 005, (0120)6277 787
    - ii. Local Helpdesk Shri. Bhushan / Shri. Mayur at (022) 25487480
    - iii. email at support-eproc@nic.in

#### ANNEXURE - 2

## TENDER ACCEPTANCE LETTER (To be given on Company Letter Head)

Date:
-------

To.

The Superintending Engineer MMG, IGCAR Kalpakkam – 603 102

**Sub: Acceptance of Terms & Conditions of Tender.** 

Tender Reference No: IGC/MMG/MCG/PMD/T-0003/2023
Name of Work: Fabrication of SS 316L porous micro filters

Dear Sir,

- 1. I/We have downloaded/obtained the tender document(s) for the above mentioned Tender/Work from the web site(s) namely: <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a> and <a href="https://eprocure.gov.in/eprocure/app">www.igcar.gov.in</a> as per your advertisement, given in the above mentioned website(s).
- 2. I/We hereby certify that I/we have read the entire terms and conditions of the tender documents (including Tender documents, annexure(s), schedule(s), corrigendum(s), Technical Specifications, Construction Safety Manual for Works Contract etc.,), which will form part of the contract agreement and I/we shall abide hereby by the terms/conditions/clauses contained therein.
- 3. The corrigendum(s) issued from time to time by your department/ organization have also been taken into consideration, while submitting this acceptance letter.
- 4. I/We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality /entirety.
- 5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt.Department/ Public sector undertaking.
- 6. I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefor or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including actions as taken by Department.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

## UNDERTAKING TO BE SUBMITTED BY THE BIDDER ON THEIR LETTER HEAD DULY SIGNED AND SEALED WITH DATE

(Scanned copy of the undertaking duly signed & sealed on letter head of the bidder to be uploaded at the time of submission of bid and original shall be submitted during the period of verification of originals).

Name of Work: Fabrication of SS 316L porous micro filters

NIT No. IGC/MMG/MCG/PMD/T-0003/2023

1. I/We hereby give an undertaking that, I/we have read and I/we am/are aware of all the classes and sub clauses of tender forms and I/we confirm that, I/we will abide by all the terms and conditions available in this tender document.

My Income tax Permanent Account Number (PAN) is ......

- 2. I/We give an undertaking that, I/We am/are not GST defaulter(s). I/We give an undertaking that, GST certificate (No. .....) is a valid certificate. I/We also give undertaking that I/We will pay GST in time during the complete period of the contract.
- 3. I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for bidding in IGCAR in future as per applicable rule. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit / Performance Guarantee.
- 4. I/ We have read and examined the Notice Inviting Tender, General Rules & Directions, Form of tender, Special Conditions, safety code for Works Contract, General Conditions of Contract, Schedule-F, Specifications, Scope of work, Schedule of construction, drawings, schedule of quantities and all other contents in the tender document for the work AND ACCORDINGLY, I / We, hereby submit credentials and other documents as are provided for, by, and in respects in accordance with, such conditions so far as applicable.
- 5. I / We, hereby tender for execution of the work specified for the President of India within the time specified in schedule "F", viz., Schedule of Quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule 1 of General rules & directions and in Clause 11 of the General Conditions of Contract and with such materials as are provided for, by and in respects in accordance with, such conditions so far as applicable.
- 6. I / We have downloaded and gone through the pre-bid clarifications issued by the Department after close of sale of tenders and submitting tender accordingly.
- 7. I / We have gone through the "Additional Notes" sheet of financial bid/BOQ and submitting tender accordingly.
- 8. I / We have understood the entire scope of work and rates (inclusive of GST) quoted accordingly. We shall carry out the work as per Schedule of Quantities, technical specifications,

drawing and complete the work within stipulated time to the entire satisfaction of the Department.

9. I/We have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I/We certify that, this bidder is not from such a country or from such a country has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. I/We acknowledge the right of the department to terminate the Bidder for false declaration or certificate, along with such other actions as may be permissible under law.
10. I/We (Name of bidder) undertake that, we meet the mandatory Local Content (LC) requirement for qualifying as 'Class I Local Supplier' as per the PP-LC Policy, against this tender. The percentage of Local Content in the bid is%.
11. If We do hereby give an undertaking that, none of my relative (s) as defined below is a are posted and/or working as AO/AAO or as an officer in any capacity in the grades of Scientific Officer-C/ Technical Officer-C and above in IGCAR(responsible for award and execution of contracts) as per details given in tender document. In case at any stage, it is found that the information given by me is false / incorrect, IGCAR shall have the absolute right to take any action as deemed fit without any prior intimation to me.
The near relatives for this purpose are defined as: 1) Members of a Hindu undivided family. 2) They are husband and wife. 3) The one is related to the other in the manner as father, mother, son(s), son's wife (Daughter-in-law), daughter(s), daughter's husband (Son-in-law), brother(s) and brother's wife, sister(s) and sister's husband (brother-in-law).

Signature with seal & date

## DECLARATION TO BE SUBMITTED BY THE BIDDER ON THEIR LETTER HEAD DULY SIGNED AND SEALED WITH DATE

(Scanned copy of the declaration duly signed & sealed on letter head of the bidder to be uploaded at the time of submission of bid and original shall be submitted during the period of verification of originals).

Name of Work: Fabrication of SS 316L porous micro filters

NIT No. IGC/MMG/MCG/PMD/T-0003/2023

- 1. This is to certify that:
  - a. I /We have submitted the tenders in the Proforma as downloaded directly from the websites which are same as available in the website and there is no change in the format, number of pages etc.,
  - b. I /We have not made any modifications / corrections / additions etc., in the tender documents downloaded from website by me / us.
  - c. I /We have checked that no page is missing and all pages as per the index are available and that all pages of tender document submitted by us are clear and legible.
  - d. I We have submitted requisite EMD in the prescribed form.
  - e. In case at later stage, it is noticed that there is any difference in my/ our tender documents with the original documents, IGCAR shall have the right to cancel the tender / work, forfeit the Earnest Money, Performance Guarantee & Security Deposit, take appropriate action as per the prevailing rules in force and IGCAR shall not be bound to pay any damages to me / us on this account.

Date:	
	(Dated Signature of
	Contractor with seal)

#### Annexure 5

#### **UNDERTAKING**

I	(Name of the contractor/ agency) hereby declare
that the machinery/equipment listed in F	Form H which are necessary to carry out the fabrication
work in-house are available with me. I h	nave all the required machinery/equipment for
manufacturing the filter in-house and wi	Il not be subcontracting filter fabrication work.
Place;	
Date:	Signature of tenderer/ Authorised signatory
	Name of the Tenderer
	Seal of the Tenderer

#### FORM 'A': FINANCIAL INFORMATION

1. Financial Analysis – Details to be furnished duly supported by figures in balance sheet/profit and loss account for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department: (Copies to be attached)

		F	inancial Year	S	
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
(a) Gross Annual turnover on works/goods/ Services orders					
(Rupees in Lakhs).					
(b) Profit/ Loss (Rupees in Lakhs).					
(c) Certified by					

Name and address of
Chartered Accountant
with Membership No.

2. Financial arrangements for carrying out the proposed work.

Viz. line of credit, Working Capital, Liquid capital, Fixed deposits etc., - Upload scanned copy of statement

- 3. The scanned copies of following certificates are to be uploaded.
  - A. Profit & Loss statement certified by CA & as submitted to income Tax Department.
  - B. Solvency Certificate from banker's of applicant. Banker's certificate should be on letter head of the bank. In case of partnership firm, certificate should include names of all partners as recorded with the bank as said in the Form "B"
  - C. GSTIN
  - D. Permanent Account Number (PAN)

Name & Address of authorised Signatory	

Note: Further details if required may be asked from the contractor after opening of the bids. There is no need to upload the entire voluminous balance sheet.

#### (Scanned copy of Banker's letter head to be uploaded)

#### FORM 'B' - FORM OF BANKERS' CERTIFICATION FROM A SCHEDULED BANK

This is to certify that to the best of our knowledge and information that M/s. / Shri.
(with address) a customer of our
bank are / is respectable and can be treated as good for any engagement up to a limit of Rs.
(Rupees
).
This certificate is issued without any guarantee or responsibility on the bank or any of the
officers.
(Signature) For the Bank

- Note:
  - (1) Banker's certificates should be on letter head of the bank.
  - (2) In case of partnership firm, certificate should include names of all partners as recorded with the bank.

FORM 'C' - DETAILS OF ALL WORKS OF SIMILAR CLASS COMPLETED IN ALL RESPECTS DURING THE LAST SEVEN YEARS ENDING PREVIOUS DAY OF LAST DATE OF SUBMISSION OF TENDER

SI. No.	Name of Work/ Project and location	Owner or Sponsoring Organization	Cost of Work in Lakhs of rupees	Date of Commencement as per Contract	Stipulated Date of Completion	Actual Date of Completion	Litigation/ Arbitration cases pending/in progress with details*	Name and address/ telephone number of officer to whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

Note: \*Indicate gross amount claimed and amount awarded by the Arbitrator

#### Notes:

- i. Applicant may submit separate form for giving details of work (completed) for each year to fill up the details as above. Separate sheets if any shall be numbered in sequence.
- ii. The scanned copies of the work orders for each work along with completion certificate shall be uploaded.
- iii. Certified that the above list of works is complete and no work has been left-out and the information given is correct to the best of my knowledge and belief.

Name & Address of authorised Signatory	

#### FORM 'D' - PROJECTS UNDER EXECUTION OR AWARDED

	1	SI. No
	2	Name of work/ project and location
	3	Owner or sponsoring Organization
	4	Cost of work (Rupees in Lakhs)
	5	Date of commencement as per contract
	6	Stipulated date of completion
	7	Up to date percentage progress of work
	8	Slow progress if any, and reasons thereof
	9	Name and Address/ Telephone number of officer to whom reference may be made
	10	Remarks
-		

Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Name and address of authorised Signatory

## Scanned copy of certificates containing following information from the clients to be uploaded

## FORM 'E' - PERFORMANCE REPORT OF WORKS REFERRED TO IN FORMS "C" (Separate certificate for each work/ Project)

- a) Name of work/ project & location
- b) Agreement No.
- c) Name of Contractor
- d) Estimated cost
- e) Tendered cost
- f) Completed cost
- g) Date of start
- h) Date of completion
  - a. Stipulated date of completion
  - b. Actual date of completion
- i) Amount of compensation levied for delayed completion, if any
- j) Amount of reduced rate items, if any
- k) Performance report

Quality of work : Very Good/Good/Fair/Poor

Financial Soundness : Very Good/Good/Fair/Poor

Technical Proficiency : Very Good/Good/Fair/Poor

Resourcefulness : Very Good/Good/Fair/Poor

General Behavior : Very Good/Good/Fair/Poor

Time Consciousness : Very Good/Good/Fair/Poor

Dated: Executive Engineer or Equivalent
Signature with Seal

#### FORM 'F' - STRUCTURE AND ORGANISATION

1.	Name	& Postal Address of the Applicant:		
2.	Tele	phone no. /Telex No. /Fax No.		
3.	docı	al status of the Applicant (Please tick and at ument defining the legal status)	·	ginal
		An individual: (b) A proprietary firm: (c) A A limited company or corporation	firm in partnership	
4.	Part	iculars of registration with various Governme	ent Bodies (attach atteste	d photocopy)
		Dept./Organisation & Place of registration	Registration No.	
5.		nes and Titles of Directors & Officers with de this work.	esignation proposed to be	concerned
6.	Des	ignation of individuals authorised to act for t	ne organisation.	
7.	cont	the Applicant ever required to suspend work inuously after he commenced the work? If sons of suspension of work.		
8.	abaı	the Applicant, or any constituent partner ndoned the awarded work before its comect and reasons for abandonment.		

9.	debarred/ black listed for tendering in any organisation at any time? If so, give details.
10.	Has the Applicant or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details.
11.	In which fields of Engineering Construction the Applicant has specialization and interest?
12.	Any other information considered necessary but not included above.
	Name and Address of authorised Signatory

## FORM 'G' - DETAILS OF TECHNICAL & ADMINISTRATIVE PERSONNEL TO BE EMPLOYED FOR THE WORK

SI. No	Designation	Total Number	Number available for this work	Name	Qualifications	Professional experience and details of work carried out	How these would be involved in this work	Remarks
1	2	3	4	5	6	7	8	9

Name and Address of authorised Signatory

# FORM 'H' - DETAILS OF TOOLS, MACHINERIES AND EQUIPMENT LIKELY TO BE USED IN CARRYING OUT THE WORK

	Name of equipment/Plant		or ke			Own	Ownership Status				
SI. No		Nos. Capacity c	Capacity or Type & make	Age	Condition	Presently owned	Leased	To be purchased	Proposed to be hired	Current location	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
1)	Strength testing equipment										
2)	Vacuum Furnace for sintering										
3)	Isostatic press										
4)	Welding Machine										
5)	Pore size analyzer										
6)	Bubble point testing facility										
7)	Filterability study analysis lab										
8)	Ultra Sonic Cleaning Machine										
9)	Vernier calipers / Micrometer										

Name and Address of a	uthorised Signatory

## Form – 'I ': Bidding Capacity Form

Maximum turnover in works/goods/service orders executed in any one year during the last five years taking into account the	
completed as well as works in progress. The value shall be	
brought to current costing level by enhancing at a simple rate	
of 7% per annum = (A)	
Year in which maximum turnover occurred	
Is audit report for the same is attached.(Yes/No)	
Number of years prescribed for completion of work for which	
bids has been invited = (N)	
N = completion period in months / 12	
Value of existing commitments and ongoing works to be	
completed during the period of completion of works for which	
bids have been invited = (B)	
Bidding capacity = (AxNx1.5)-B	

Signature of Bidder(s)

#### **FORM - J: CHECK LIST**

## BEFORE SUBMITTING THE TENDER, THE TENDERER MUST CHECK THE FOLLOWING:

Say 'Yes' or 'No' or 'Not Applicable'

1.		e mandatory scanned documents such as ker`s Cheque or Fixed Deposit Receipts of lowards EMD?	:			
2.	Have you filled sched	ule of quantities and unit rates in the Price bid?	:			
3.		e conditions of contract in to (Wherever you differ tin the covering letter)	:			
4.		the necessary equipment instruments tools/tackles & etc. for completion of the job, whether specifically	:			
5.	(This is applicable for	electrical contracts only)				
	(i) Are you registered with Tamilnadu State / or any other State Electrical Inspectorate?					
	(ii) If so, is scanned copy of the registration certificate is uploaded?					
6.	Have you uploaded all the required documents (Annexures 2-4, Forms A-I, Certificates, eligibility criteria documents etc):					
	(This form also shou	ıld to be uploaded with the bid documents)				
Addres	ss of Tenderer					
	Phone number					

Signature of Bidder(s)

#### Section V

#### **Technical Specifications**

**Description of the work** : Fabrication of SS 316L porous micro filters

Quantity : 2 filter assemblies as per the following detailed

technical specifications

#### Scope of the work:

Fabrication of type 316L stainless steel micro filter assemblies, as shown in Fig. 1 meeting all the technical specification with respect to dimension and filtering efficiency.

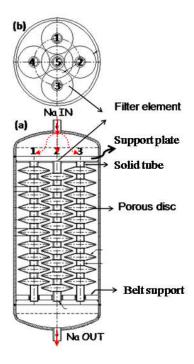


Fig. 1 (a) Schematic of the SS micro filter assembly (b) Top view of filter elements

#### **Detailed scope of the work:**

Detailed scope involves preparation of fabrication drawings, Quality Assurance Plan (QAP), stage wise inspection plan, materials required for fabrication, fabrication of filter elements as per approved fabrication drawing and QAP, testing and supply of type 316L SS filter assemblies. The filter assemblies shall be stringently adhering to the specifications given below. Work will be carried out in the following stages:

(a)	Fabrication of 1 No. of SS 316L sintered porous micro disc and solid seamless tubes
(b)	Fabrication of 1 No. of SS 316L filter element after approval of (a) by IGCAR

- (c) Fabrication of 10 Nos. of SS 316L filter elements after approval of (b) by IGCAR
   (d) Fabrication of 2 Nos. of SS 316L filter assembly after approval of (c) by IGCAR
- (1) Scope of work of the vendor:

#### (a) Fabrication of SS 316L sintered porous micro disc and solid seamless tubes; Quantity - 1No.

Fig. 2 shows photograph of porous disc and solid seamless tube to be fabricated and Fig. 3a and b show required dimensions of disc and tube respectively. Further specifications are given in Table 1.



Fig. 2 Porous disc with tube to be fabricated

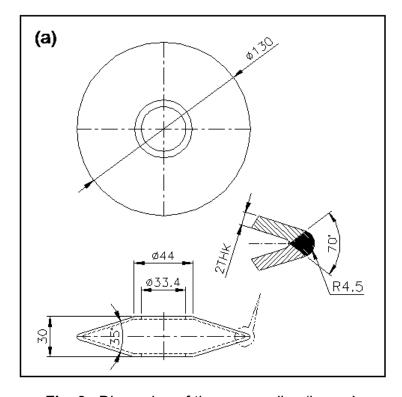


Fig. 3a Dimension of the porous disc (in mm)

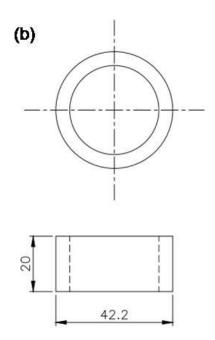


Fig. 3b Dimension of the solid seamless tube (in mm) on both sides of the disc

**Table 1** Specifications for sintered porous disc

Material of construction	:	Type 316L stainless steel
Quantity required (No.)		1
Nominal pore size		3 μm
Degree of filtration		3-5 μm 99%
Maximum size of interconnecting pore	:	Maximum up to 5μm

For qualifying the porous disc and tube assemblies following tests have to be carried out:

- (i) Bubble point test as per ASTM F316/ASTM D6767 to record bubble point pressure, bubble point diameter, mean pore size, pore size distribution graph and flow vs pressure drop graph.
- (ii) Mock-up qualification for welding the sintered porous disc to tubes to be established.
- (iii) Weld joint puncture test/Fabrication integrity test with respect to bubble point and manometer test as per ISO 2942 visual inspection to check for puncture in joint. Videographic evidence to be sent to IGCAR Team
- (iv) Vendor to send such welded disc + tube for inspection and approval to IGCAR
- (v) QC reports to be sent.

#### (b) Fabrication of SS316L filter element; Quantity - 1No.

Fig. 4 shows the dimensions of the filter elements to be fabricated in which Fig. 4a and 4b refers to the filter elements in the sides and at the centre respectively (as per Fig. 1b). One filter element consists of 10

Nos. of porous disc (as per the dimensions in Fig. 3a) and 11 Nos. of solid seamless tubes (as per the dimensions in Fig. 4a and Fig. 4b). Bottom most end of the tube is to be welded with dummy plate.

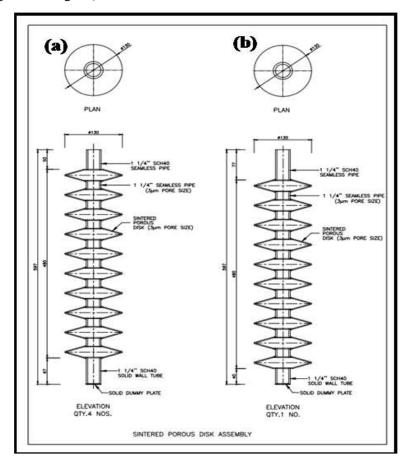


Fig. 4 Dimension of the filter element to be fabricated (in mm)

The filter assembly needs to be qualified through the following tests.

- (i) Bubble point test as per ASTM F316/ASTM D6767 on randomly chosen 10% of the number of discs fabricated to record bubble point pressure, bubble point diameter, mean pore size, pore size distribution graph and flow vs pressure drop graph.
- (ii) Weld joint puncture test/Fabrication integrity test with respect to bubble point and manometer as per ISO 2942 visual inspection to check for puncture in joint. Videographic evidence and QC reports to be sent to IGCAR Team.

#### (c) Fabrication of SS 316L filter elements; Quantity - 10 Nos.

10 Nos. of filter elements as per the dimensions in Fig. 4 incorporating user feedback (based on stage 2 tests) to be fabricated. Out of the 10 Nos. of filter elements 8 Nos. will be fabricated as per the dimensions given in Fig. 4a and 2 Nos. will be fabricated as per the dimensions given in Fig. 4b.

#### Acceptance criteria

- 1. Dimension as per technical specification.
- 2. Bubble point test as per ASTM F316/ASTM D6767 on randomly chosen 30% of the number of discs fabricated during stage 3 to record bubble point pressure, bubble point diameter, mean pore size, pore size distribution graph and flow vs pressure drop graph.
- 3. If any of the discs fail to meet the technical specification, bubble point test to be carried out for all the porous discs fabricated in stage 3.
- 4. Healthiness of welding shall be checked visually. In case of any crack or weld failure, vendor shall notify the purchaser or his authorized representative. The vendor shall obtain permission from the purchaser before any repair is undertaken. All repaired welds shall be reexamined and tested as per the requirements of the original weld and shall meet the same. The number of repairs permitted for weld is limited to maximum two times at any location.
- 5. All 10 nos. of filter elements shall be separately tested for crack or weld failure. If any filter element out of 10 numbers is not meeting our acceptance criteria it will be rejected.

#### (d) Fabrication of SS 316L filter assembly; Quantity - 2 Nos.

Each SS 316L filter assembly will have 5 filter elements welded to SS 316L support plate on the top as shown in Fig. 5. Dimensions of supporting plate are 360 mm outer diameter and 8 mm thickness. Arrangement of the individual filter elements inside the filter assemblies will be as per Fig. 1b where the filter element at the centre will have dimensions as per Fig. 4b and the filter elements in the sides will have dimension as per Fig. 4a.

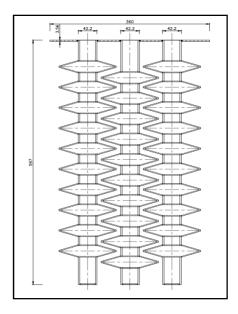


Fig. 5 Dimension of the filter assembly to be fabricated (in mm)

#### (2) Responsibilities of IGCAR:

Microstructure analysis on representative specimen extracted from sintered porous discs for pore size analysis, micro chemical analysis to confirm chemical composition, quality checking and carbon particulate size analysis before and after filtration will be within the scope of the department.

#### **Other Terms and Conditions**

- 1. Vendor will maintain confidentiality with respect to the nature of work awarded.
- 2. The bidder shall get the clarifications from the concerned engineer(s) and shall visit the site, if required, for familiarization before submitting the bid.
- 3. All safety precautions shall be observed as stipulated by the engineer-in-charge. The contractor shall be liable for any damage to the man and material due to non-observance of safety precautions during currency of the contract.
- 4. The contractor shall be liable for safety of the personnel working under the contract.
- 5. No escalation clause is applicable during the currency of the contract.
- 6. Scope of the work can vary±25% at the discretion of department and the same unit rates shall be applicable
- 7. Packing and Transportation: On completion of fabrication the vendor shall deliver the fabricated filter assemblies at IGCAR, Kalpakkam, Tamilnadu. Packing shall withstand any sort of shocks during handling, transportation and storing at site. Packing procedure shall be prepared by the manufacturer and submitted to the purchaser for approval. The packing shall be carried out as per approved procedure. The component shall be packed and held rigidly inside a steel structure (dismountable type) with adequate support points to be designed by the supplier and approved by the purchaser. This steel structure shall be capable of taking the full load of component assembly in horizontal and vertical condition and during changeover from horizontal to vertical condition.
- 8. Guarantee: The vendor shall give a guarantee for the component against any defect in workmanship for a period of 12 months from the date of installation and for 18 months from the date of receiving the fabricated components at site whichever is earlier. If any deficiency is noticed in performance of the component because of manufacture, inspection & testing, the manufacturer upon notification by the purchaser and at purchaser's convenience shall forthwith restore them to satisfactory condition without any extra cost to the purchaser.
- 9. Payment terms: Security deposits and TDS for IT and GST will be deducted from payment as per the relevant clauses in the tender.
- 10. Payment will be made as per the following work completion schedule
  - 30% against completion of stage 1 and acceptance certificate issued from IGCAR
  - 20% against completion of stage 3 and acceptance certificate issued from IGCAR
  - 50% against completion of stage 4, submission of copy of the invoice, dispatch of 2 Nos. of SS 316L filter assemblies and acceptance certificate issued from IGCAR

Scientist-in-charge (MMG, IGCAR)